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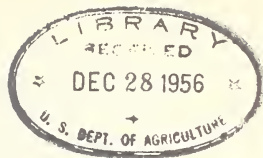
# SAFE USE OF AGRICULTURAL CHEMICALS

BY

Lea Hitchner

National Agricultural Chemicals Association

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There has been a very rapid increase in the use of pesticides in the past few years. This has been due to the wide acceptance of pesticides to help reduce the losses farmers sustain to pests during the production of farm commodities.

Research has developed ways of controlling most of the destructive insects, weeds, diseases, and other pests with pesticides. But, these important farm tools must be used in a proper and safe manner. Farmers have the responsibility of avoiding injury to themselves, to their families and neighbors. In addition, they must avoid unnecessary contamination of food.

The accident rate from the use and handling of pesticides is actually very low when compared to many other articles of commerce. Accidents caused by pesticides are well in the minority among farm accidents as a whole. Striking or bumping against objects, falls, natural elements, infections from neglected wounds and other similar accidents rank above pesticides.

A preliminary survey of the few accidental deaths that have been attributed to pesticides shows that over 75 percent of these deaths occurred among children under 10 years of age, and 90 percent of those are under five years of age. Proper storage of pesticides would have avoided most of these accidents.

This compilation of statistics is a part of the over-all safety campaign which is being sponsored by the National Safety Council.

Every known source of information is being used or has been checked by NAC in this study. These sources include the national office of Vital Statistics, State Bureaus of Vital Statistics, State Commissioners of Agriculture, State chemists, State Food and Drug officials, agricultural colleges, and others to whom NAC has been referred for information.

Careful examination of the reports has shown that about 65 percent of accidental deaths among adults could have been prevented had the victim taken about one minute to read and follow the directions on the label. The leading cause of accidents among adults was flagrant disregard to the printed instructions and precautions.

Accidents involving pesticides can be attributed to several causes. All are preventable if proper precautions are followed. Some of the main causes include:

- (1) Improper storage-leaving pesticides exposed to children and irresponsible persons.
- (2) Failure to read and follow rules for use which are found on each pesticide container.
- (3) A careless attitude in the disposal or return of empty containers.
- (4) Negligent application of pesticides.

- (5) Failure to observe personal hygiene when and after using and applying pesticides.

It is important to remember that the conditions under which pesticides are used vary considerably. Safety precautions should be observed and followed at all times with all pesticides. It is impossible to list rules for safe use that will cover pesticides under all conditions; however, the following safety factors should be observed by all users to minimize possibility of accidents:

- (1) Read the label, carefully noting the warnings and cautions, before opening the container and before each use. Follow the directions accurately.
- (2) Keep pesticides out of reach of children, pets, and irresponsible persons.
- (3) Always keep pest control materials in original, closed, and properly labeled containers.
- (4) Never give a neighbor or anyone a portion of a pesticide in an unlabeled container.
- (5) Store pesticides in safe, separate rooms, cabinets, or closets, or on a high shelf and where not exposed to excessive sun or cold.
- (6) Do not store pest control materials where food or feedstuffs are stored or handled.
- (7) Observe cautions to minimize residues on edible portions of plants.
- (8) Wash hands and face after spraying or dusting.
- (9) Do not smoke while spraying or dusting.
- (10) Avoid spilling pesticides on the skin or clothing.
- (11) Wash immediately and thoroughly to remove any such spillage.
- (12) Avoid inhalation of sprays or dusts.
- (13) Wash clothing each day before reuse.
- (14) When treating around pet or livestock quarters, cover food and water containers.
- (15) Be careful not to contaminate fish ponds and other streams.
- (16) Dispose of empty containers so they pose no hazard to humans, animals or valuable plants.
- (17) Do not use spray equipment for other pesticides that has been used to spray hormone weed killers, such as 2,4-D.

Of course, not all pesticides are toxic to man. Some are relatively safe. Some may present no danger or hazard at all. Dr. L. C. McGee, a medical doctor, from Wilmington, Delaware, speaking at the Eighth annual Gulf Coast Industrial Health Conference in September last year, summed it up like this, "Chemicals, like people, can be mild, fractious, and often exasperating. Like people, chemicals are of many types and dispositions. Most are uncomplaining, law-abiding citizens who present no special problems. Some are unstable and unpredictable. Some are out-and-out neurotics, requiring a sharp and observant discipline. Others, harmless by themselves, may be influenced by bad company. Still others are troublemakers in solitary, but docile and helpful in tandem. Some are just plain bad actors."

There are more than 100 laws in the United States that govern the sale, distribution, and use of pesticides. These are listed in such general categories as insecticide and fungicide laws, pharmacy, poison, livestock remedy laws, etc. Each year thousands of dollars are spent in order to comply with these various legislative restrictions on the sale and use of pesticides.

One of the latest laws enacted to regulate pesticides is the Pesticide Chemicals Amendment to the Federal Food, Drug and Cosmetic Act, commonly known as the Miller Bill. The Miller Amendment assures the American public of the safest food crops in the world insofar as the use of pesticide chemicals is concerned. The provisions of this amendment protect the grower from public criticism and from the criticism of the crackpots which may, at times, jeopardize wide public acceptance of a product and might hinder or reduce the large farm markets now enjoyed.

Under existing legislation, the industry is required to supply two basic types of data before a pesticide may be offered for sale in interstate commerce.

- (1) Evidence showing the effectiveness of the pesticide material and the amount of residue remaining on a treated crop when the pesticide is used in accordance with label directions, must be furnished to the Department of Agriculture. This information in due course reaches the Food and Drug Administration when the use of the pesticide results in a residue.
- (2) Toxicity data necessary to determine a tolerance, when one is required, must be furnished the Food and Drug Administration. In establishing a tolerance, the Food and Drug Administration takes into consideration the amount of residue that remains in or on the raw agricultural commodity.

Residue and toxicity data are obtained from work done by companies in their own laboratories, from field operations, and from the work of Land-Grant colleges, both on cooperative projects and independently. Data are also obtained from private research institutions and from expert organizations doing research work in toxicology and medicine.

The result of this program means that adequate information on residues and toxicity of a pesticide is deposited by the company with the Department of Agriculture and the Food and Drug Administration. The grower is reasonably assured that when he uses approved pesticides as directed no residue will remain in excess of any tolerance that may be established by the Food and Drug Administration. Likewise, the public is assured that no undue hazard to the public health will result when a pesticide is used.

Growers and consumers need not be afraid of the use of pesticides when tolerances have been established under the Miller Bill. Once a tolerance has been issued by the Food and Drug Administration, it means that residues of the pesticide not in excess of the tolerance level will be safe. This, of course, has been determined through adequate experimental studies. When a tolerance has been established, or it has been proved that a numerical tolerance is not necessary, it means that a pesticide used properly will leave no harmful residues.

For those who make recommendations for use and for the benefit of growers who use pesticides, the following is one practical solution that may be followed to meet the requirements of the Miller Bill. The program to be followed with reasonable discretion is: "Follow the directions given on the registered labels of reliable manufacturers." Label directions, if carefully followed as to dosage and timing, are reasonable assurance that if any residues remain in or on the raw agricultural commodity, they are within safe limits.



We must all be prepared for a few changes. Information pertaining to these changes will, in due course, be available from the manufacturer, from the Food and Drug Administration, and from the United States Department of Agriculture. These changes will be made clear as petitions are submitted and tolerances are announced.

We have a problem of educating growers and users without creating fear. Many companies have progressive programs on safety and safe use. Numerous articles have appeared in leading publications on this subject. An expanded program based on the recommendations of our Medical Committee and our Public Relations Committee, is now under way. This program contemplates displays at medical association meetings, release of information through radio and television, and a general industry program emphasizing safety in advertising matter and other company literature. Other associations similarly are emphasizing safety and have "Read the Label" programs in effect. Basically, the entire safety program is one of education.

The following summarization of the growers' position under the Miller Amendment was presented by Winton B. Rankin, Assistant to Commissioner of the Food and Drug Administration, in a recent address.

"(1) The purpose of the law is to permit growers to use pesticides in the production of food without hazard to consumers.

(2) Growers have nothing to worry about from the Miller Pesticide Amendment if they follow approved label directions in applying sprays and dusts to their crops.

(3) This does not mean that the growers can afford to be careless in applying pest control materials. They must not have excessive residues on crops at time of harvest.

(4) Growers who deviate from the label directions should do so only on the basis of reliable advice that the deviation will not leave excess residues.

(5) An easy rule for growers to follow is: Use sprays according to label directions on the crops specified, in the amounts specified, and at the times specified."

Safe use of agricultural chemicals will assure the continued use of pesticides without injury to growers, their neighbors, or to consumers of their food products.



DIRECTORY OF POISON INFORMATION CENTERS

A recent development in a nationwide safety program relating to accidental poisonings has been the creation of a series of special poison information centers throughout the country.

These centers consist of vast files of information on symptoms and antidotes--remedies for counteracting poisons. This information is available to doctors only. When a doctor has a case of accidental poisoning from any cause, he can call one of these centers at any time of day or night to obtain accurate information helpful in treating the case.

A complete list of poison information centers now in operation follows, along with the names of their directors and their telephone numbers or street numbers:

Boston, Mass., Dr. Lendon Snedeker, BE 2-2120 or BE 2-7800.  
Chicago, Ill., Dr. Joseph Christian, Stritch School of Medicine,  
706 South Wolcott Street.  
Cincinnati, Ohio, Dr. Robert H. Kotte, Academy of Medicine of  
Cincinnati, PA 1-2345 or AV 1-0959.  
Dallas, Texas, Dr. Kathryn Willis, Southwestern Medical School,  
2211 Oak Lawn Avenue.  
Durham, N. C., Dr. Jay Arena, Duke Hospital, Tele. 9011.  
Grand Rapids, Mich., Dr. Mark W. Dick, 1508 McKay Tower, GL 1-3591.  
Indianapolis, Ind., Dr. Irving Rosebaum, 401 East 34th Street.  
Louisville, Ky., Dr. William Curtis Adams, Chief Pediatric Resident, .  
AM 1831.  
Memphis, Tenn., Dr. Albert N. Jones, East Memphis Children's Clinic,  
4720 Poplar Avenue.  
New Bedford, Mass., Dr. George W. Starbuck, Chairman, American Academy  
of Pediatrics, Tele. 9-6211, Ext. 275.  
New York, N. Y., Dr. Harold Jacobziner, Assistant Commissioner of  
Health, WO 2-6900.  
Phoenix, Ariz., Dr. Paul B. Jarrett, AL 8-8331.  
Upper Montclair, N. J., Dr. Harold R. Mancusi-Ungaro, Mountainside  
Hospital, MO 2-7375.  
Newark, N. J., Dr. William H. Fost, Babies Hospital HU 2-6200.  
Atlantic City, N. J., Dr. Walter B. Stewart, City Hospital.  
Washington, D. C., Dr. Allan B. Coleman, Children's Hospital,  
DU 7-4220, Ext. 250.

In addition, centers are being developed in Cleveland, Ohio; Buffalo, N. Y.; Pittsburgh, Pa.; Denver, Colo.; Nashville, Tenn.; Baltimore, Md.; and Philadelphia, Pa. When these centers become active, the name of the director and his telephone or street number will be published in NAC NEWS.

